

## THREE NEW SPECIES OF VACCINIACEAE

A. C. Smith

Types of the following species are deposited in the herbarium of the New York Botanical Garden, and are duplicated in the U. S. National Herbarium.

## THIBAUDIA ALBIFLORA A. C. Smith, sp. nov.

Frutex scandens; ramulis elongatis glabris teretibus cinereis vel fuscescentibus; petiolis incrassatis glabris 3--4 mm. longis; laminis coriaceis oblongis vel lanceolato-oblongis, 12--22 cm. longis, 4--7 cm. latis, basi rotundatis vel obtusis, apice longe acuminatis, margine leviter revolutis, utrinque glabris, 5-plex-nerviis, nervis secundariis prope basin orientibus, cum costa supra leviter elevatis vel planis subtus prominentibus, venulis reticulatis supra obscuris subtus prominulis; inflorescentia ramulis infra folia plerumque exoriente, copiose paniculata, 25--75-flora, 8--10 cm. longa, 5--8 cm. lata, rhachide et ramulis secundariis gracilibus cinereo-puberulis; pedicellis gracilibus 9--14 mm. longis, cum bracteis et bracteolis minutis puberulis; calyce mox glabro sub anthesi 2--3 mm. longo, tubo brevi 2--3 mm. diametro basi truncato, limbo lobis late deltoideis acutis inclusis 1.5--2 mm. longo; corolla alba 8--10 mm. longa 2--3 mm. diametro, basi et apice contracta, lobis 1 mm. longis; staminibus circiter 7 mm. longis aequalibus; filamentis membranaceis connatis 3 mm. longis; antheris 5 mm. longis, tubulis latis flexilibus distinctis per rimas elongatas dehiscentibus quam loculis brevioribus; stylo filiformi, stigmatate late peltato.

Type, Ynes Mexia 6682, collected Nov. 17--20, 1934, in forest near stream, Hacienda Solento, near Santa Rosa, Canton Pajili, Province of León, Ecuador, alt. 1000 m. The pedicels are said to be clear coral red, the corollas waxy white. The occurrence of white flowers in the genus may be more frequent than generally believed, but collectors usually fail to state the color, and in a dried condition the corollas appear red.

The new species extends southward the known range of that small group of the genus with paniculate inflorescences and large leaves, comprising the Colombian T. paniculata A. C. Sm. and T. Archeri A. C. Sm. and the Costa Rican T. costaricensis Hoer. From the first of these, T. albiflora is distinguished by its shorter flowers and proportionately longer leaves, which are neither bullate nor abruptly acuminate. From the second our species differs also by its short flow-

ers and by its 5- rather than 7-nerved leaves. From T. costaricensis, perhaps its closest ally, the new species differs by having its leaves proportionately broader, its inflorescence conspicuously larger and with more numerous flowers, and its anthers with comparatively short tubules.

CAVENDISHIA MEXIAE A. C. Smith, sp. nov.

Frutex scandens; ramulis subteretibus glabris juventute striatis; petiolis subteretibus 7--10 mm. longis glabris; laminis coriaceis oblongis, 10--13 cm. longis, 4--5.5 cm. latis, basi acutis vel cuneatis, apice caudato-acuminatis (acumine 1--2 cm. longo), margine integris et anguste revolutis, utrinque glabris vel subtus parcius nigro-setulosis, 5 (—7)-pli-nerviis, nervis secundariis supra basin orientibus, cum costa supra leviter impressis vel subplanis subtus prominentibus, venulis reticulatis supra leviter elevatis subtus immersis; inflorescentia axillari racemosa 10--14-flora ubique glabra ad 7 cm. longa, basi bracteis imbricatis oblongis papyraceis ad 3 cm. longis instructa; pedicellis rugosis 7--15 mm. longis, basi bractea eis basi rhachidis simili subtentis, prope basin bracteolas ovatas 5 mm. longas gerentibus, superne incrassatis et cum calyce articulatis; calycis tubo rugoso breviter cylindrico sub anthesi circiter 3 mm. longis et 6 mm. diametro, limbo erecto obscure glanduloso cum lobis circiter 4 mm. longis, lobis late deltoideis 1 mm. longis, praeter apicem calloso-marginatis; corolla tenuiter carnosa cylindrica, 17--24 mm. longa, 4--6 mm. diametro; staminibus subaequalibus (filamentis antherisque compensanter inaequalibus), quam corolla leviter brevioribus; filamentis nigrescentibus glabris circiter 3 mm. et 6 mm. longis; loculis leviter granulatis circiter 5 mm. longis; tubulis alternatim circiter 9 mm. et 6 mm. longis, per rimas elongatas dehiscentibus; stylo filiformi corollam aequante, stigmate capitato.

Type, Ynes Mexia 6916, collected Feb. 18--20, 1935, on edge of dense forest near Puyo, Province of Napo-Pastaza, Ecuador, alt. 360 m. The closest ally of the new species appears to be the Colombian C. amalfiensis Mansf., which has the leaves different in texture, less obviously pli-nerved, narrower in proportion, and subcordate at base, the inflorescence shorter, and the flower proportions somewhat different.

CAVENDISHIA CONFERTIFLORA A. C. Smith, sp. nov.

Frutex; ramulis subteretibus glabris; petiolis teretibus glabris 6--9 mm. longis; laminis tenuiter coriaceis vel chartaceis, utrinque pallide viridis, oblongis vel oblongo-ellipticis, 12--16 cm. longis, 3.5--5.5 cm. latis, basi rotundatis vel minute subcordatis, apice acuminatis (acumine

angusto obtuso 7--20 mm. longo), margine leviter recurvatis, supra glabris, subtus parce et minute brunneo-pilosis vel punctatis, 5 (vel obscure 7)-pli-nerviis, nervis 5--10 mm. supra basin orientibus, supra leviter impressis vel elevatis, subtus prominentibus, venulis utrinque prominulis; inflorescentiis prope apices ramulorum in axillis foliorum caducorum solitariis, racemosis, 15--25-floris, glabris, basi bracteis deciduis instructis; rhachide robusto angulato 4--6 cm. longo; floribus confertis in axillis bractearum solitariis, bracteis chartaceis vel tenuiter coriaceis integris suborbicularibus vel late obovatis, 10--12 mm. longis, 13--14 mm. latis, margine interdum minute nigro-glanduloso-ciliatis; pedicellis teretibus apice dilatatis et saepe obliquis, sub anthesi inconspicuis, sub fructu ad 4 mm. longis, basi bibracteolatis (bracteolis chartaceis vel membranaceis ovatis vel obovatis, 4--5 mm. longis et latis, sub anthesi calycis basem amplectentibus); calyce coriaceo, sub anthesi bracteis occulto 6--8 mm. longo, tubo 4--5 mm. diametro obscure glanduloso-punctato, limbo suberecto quam tubo paullo longiore, lobis 5 oblongis margine apicem versus interdum obscure glanduloso-ciliatis, 4--5 mm. longis, 3--4 mm. latis, apice obtusis vel interdum emarginatis, marginibus basin versus anguste imbricatis; corolla carnosae cylindrico-urceolata, maturitate ad 16 mm. longa, 6--7 mm. diametro, apice ad 3 mm. contracta, lobis 5 parvis acutis; staminibus subaequalibus, filamentis ligulatis glabris distaliter contractis et nigrescentibus, alternatim circiter 2.5 et 4 mm. longis, antheris flavis, alternatim circiter 8 et 7 mm. longis, tubulis quam oculis paullo longioribus, per rimas elongatas dehiscentibus; stylo quam corolla paullo brevior, stigmate truncato; fructis juvenilibus coriaceis subglobosis calycis lobis conspicuis coronatis.

Type, A. F. Skutch 2991, collected in December, 1936, in riverside thicket in the vicinity of El General, Province of San José, Costa Rica, alt. 1560 m. The collector notes that the bracts are pink and the corollas waxy white. In a dried condition, the apex of the corollas appears much paler than the lower portion, which is hidden by bracts.

This very distinct species, in inflorescence characters, can be compared among Central American species only with C. crassifolia (Benth.) Hemsl. and another undescribed plant recently collected by Skutch, but both of these have much larger enveloping bracts, comparatively long pedicels, and entirely different calyx lobes, in addition to foliage differences. A closer ally of the new species is the Colombian C. compacta A. C. Sm., with which it has in common short pedicels and large slightly imbricate calyx lobes. The Colombian plant, however, has much larger bracts which give the inflorescence a different aspect, longer flowers, and leaves

which are proportionately broader and with more highly confluent primary nerves.

STUDIES OF MEXICAN AND CENTRAL AMERICAN PLANTS -- II (a)

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The present paper is a continuation of studies of Mexican and Central American plants based primarily on collections in the Herbarium of the University of Michigan and the Gray Herbarium. Five of the novelties described, species of Tapi-  
rira, Ilex, Clusia, Bauhinia, and Erythroxyton, were collected by the writer in 1936 on the Carnegie-Michigan expedition to British Honduras.

One of the most important collections ever made in southern Mexico was received recently from Mr. Eizi Matuda. His botanical work is being concentrated in Chiapas, a state too much neglected by botanists. A number of new and noteworthy species are represented, and seven of the novelties are described herein. Probably the outstanding discovery is a new species of Podocarpus which the writer takes pleasure in naming for the collector.

PODOCARPUS MATUDAI Lundell, sp. nov.

Arbor, foliis coriaceis, lanceolatis, 4--8.5 cm. longis, 12--19 mm. latis, apice acuminatis, basi breviter angustatis; costa supra ad basin versus prominente ad apicem versus planiuscula. Amenta masculina solitaria, sessilia, cylindrica, ca. 3.3 cm. longa, 4 mm. diam., basi bracteata.

A tree; leaves coriaceous, lanceolate, 4 to 8.5 cm. long, 12 to 19 mm. wide, apex acuminate, base short-attenuate, costa prominent above near the base, becoming plane toward the apex, plane or slightly impressed beneath; staminate ament solitary, axillary, cylindrical, about 3.3 cm. long, 4 mm. in diameter, subtended at base by 6 bracts, the bracts broadly ovate or depressed ovate, cuspidate, 2 to 4.5 mm. long.

Type in the Herbarium of the University of Michigan, E. Matuda 698, collected on Mt. Pasitar, Chiapas, Mexico, December 29, 1936.

This remarkable addition to the Mexican flora is distinguished from closely related Central American species by its prominent costa and broad leaves.